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<b>(21) International Application Number:</b> PCT/US94/01046 <b>(22) International Filing Date:</b> 27 January 1994 (27.01.94) <b>(30) Priority Data:</b> 08/010,410      29 January 1993 (29.01.93)      US  <b>(71) Applicant (for all designated States except US):</b> CORNELL RESEARCH FOUNDATION [US/US]; 20 Thornwood Drive, Ithaca, NY 14850 (US).  <b>(72) Inventors; and</b> <b>(75) Inventors/Applicants (for US only):</b> GONSALVES, Dennis [US/US]; 595 Castle Street, Geneva, NY 14456 (US). PANG, Sheng-Zhi [CN/US]; 666 West North Street, Geneva, NY 14456 (US).  <b>(74) Agent:</b> YAHWAK, George, M.; Yahwak & Associates, 25 Skytop Drive, Trumbull, CT 06611 (US).	<b>(81) Designated States:</b> AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i>	

**(54) Title:** TOMATO SPOTTED WILT VIRUS

**(57) Abstract**

The nucleotide sequences for tomato spotted wilt virus (TSWV) nucleocapsid is described, and transgenic plants containing the nucleocapsid nucleotide sequence from a TSMV isolate is shown to provide resistance in the transgenic plant to *Tospoviruses* from different serogroups. In addition, transgenic plants containing the nucleocapsid nucleotide sequence from a lettuce isolate of TSWV were produced and shown to provide (in plants producing small amounts of the nucleocapsid protein) resistance in the transgenic plant to both homologous and closely related viral isolates whereas plants producing larger amounts of the nucleocapsid protein possessed moderate levels of protection against both the homologous isolate and isolates of distantly related Impatiens necrotic spot virus (INSV).